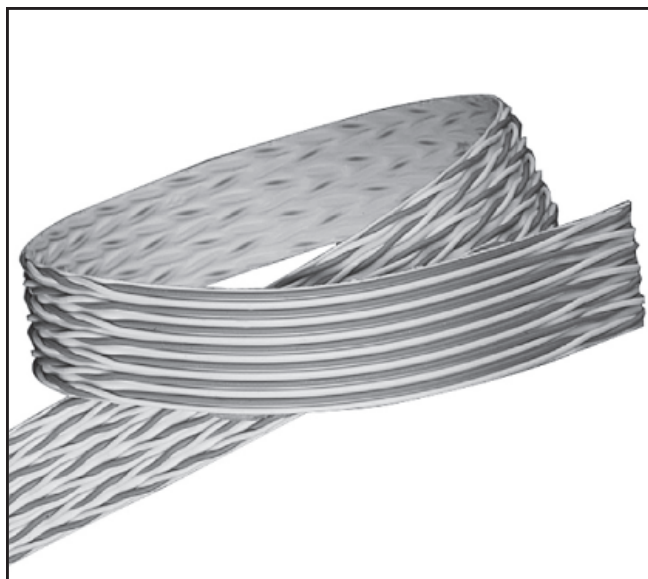


# 3M™ Twisted Pair Flat Cable

.050" 28 AWG Stranded, Mass Terminable, Halogen Free Polyolefin

2100 Series



- Advantage of this halogen free insulation are low smoke (BSS 7238) and low toxicity of combustion gases (NES 713) reducing the risk to firefighters and low corrosivity of combustion gases (pH≈6.0) reducing damage to nearby equipment
- 28 AWG stranded conductors on .050 inch pitch permits mass terminations to a broad line of IDC connectors
- Please contact your 3M sales representative for variations not described in this specification
- See Regulatory Information Appendix (RIA) for chemical compliance information (RIA E1 & C1 apply)

Date Modified: September 9, 2010

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## Physical

### Insulation:

Material: Halogen-Free Polyolefin (PO) Appendix C1 & E1 apply.

Color: Blue / Off-White Pairs

### Marking:

Standard: None

**Conductors:** 28 AWG 7 × 36 [ 0.127 ] Tinned Stranded Copper

## Electrical

**Voltage Rating:** USA: 150V

EU: <50V

**Insulation Resistance:**  $>10^{10} \Omega/10 \text{ ft. [ 3 m ]}$

**Characteristic Impedance:** Unbalanced  
102  $\Omega$

**Balanced**  
119  $\Omega$

**Capacitance:** 16.9 pF/ft [ 55.4 pF/m ]

14.6 pF/ft [ 47.9 pF/m ]

**Inductance:** 0.18  $\mu\text{H}/\text{ft}$  [ 0.59  $\mu\text{H}/\text{m}$  ]

0.21  $\mu\text{H}/\text{ft}$  [ 0.69  $\mu\text{H}/\text{m}$  ]

**Propagation Delay:** 1.74 ns/ft [ 5.71 ns/m ]

1.73 ns/ft [ 5.68 ns/m ]

**Velocity of Propagation:** 58%

59%

Note: Unbalanced is measured between ground-signal-ground conductors. Balanced is measured between conductors within a pair.

## Environmental

**Temperature Rating:** -20°C to +80°C

**Flammability Rating:** USA: UL VW-1 EU: IEC 332-1 & -3

UL File No.: E42769, Style No: 21008

**3M**

Interconnect Solutions

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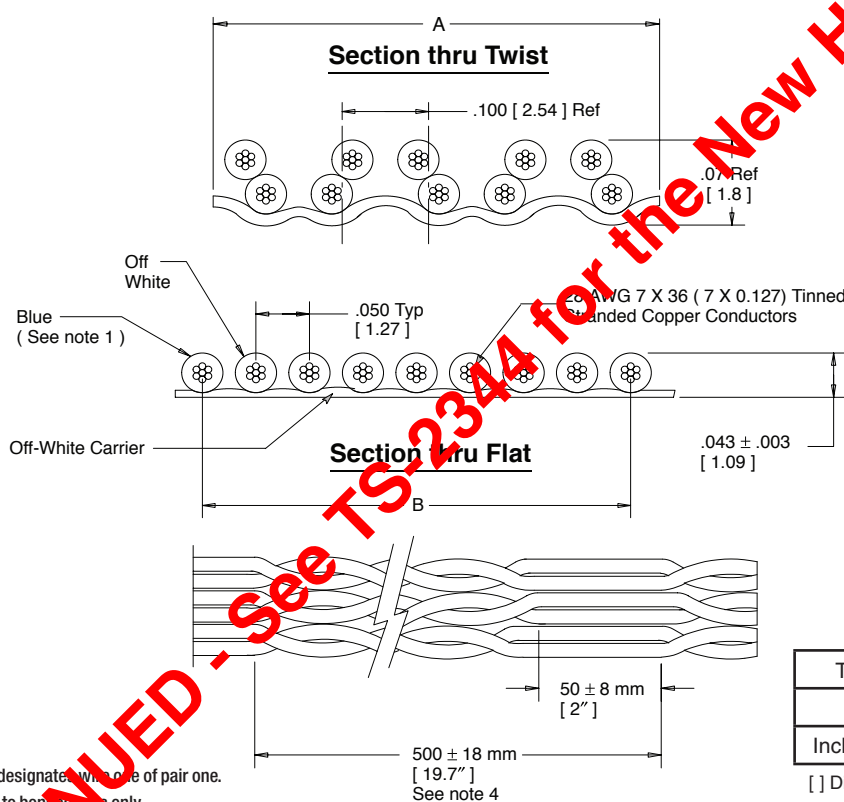
**800-225-5373**

# 3M™ Twisted Pair Flat Cable

.050" 28 AWG Stranded, Mass Terminable, Halogen Free Polyolefin

2100 Series

| Number of Conductors | 3M Part Number | Dimension A   | Dimension B            |
|----------------------|----------------|---------------|------------------------|
| 10 (5 pair)          | 2100/10TP      | 0.50 [ 12.7 ] | 0.450 ± .010 [ 11.43 ] |
| 14 (7 pair)          | 2100/14TP      | 0.70 [ 17.8 ] | 0.650 ± .010 [ 16.51 ] |
| 16 (8 pair)          | 2100/16TP      | 0.80 [ 20.3 ] | 0.750 ± .010 [ 19.05 ] |
| 20 (10 pair)         | 2100/20TP      | 1.00 [ 25.4 ] | 0.950 ± .010 [ 24.13 ] |
| 24 (12 pair)         | 2100/24TP      | 1.20 [ 30.5 ] | 1.150 ± .010 [ 29.21 ] |
| 26 (13 pair)         | 2100/26TP      | 1.30 [ 33.0 ] | 1.250 ± .010 [ 31.75 ] |
| 34 (17 pair)         | 2100/34TP      | 1.70 [ 43.2 ] | 1.650 ± .015 [ 41.91 ] |
| 40 (20 pair)         | 2100/40TP      | 2.00 [ 50.8 ] | 1.950 ± .015 [ 49.53 ] |
| 50 (25 pair)         | 2100/50TP      | 2.50 [ 63.5 ] | 2.450 ± .015 [ 62.23 ] |
| 60 (30 pair)         | 2100/60TP      | 3.00 [ 76.2 ] | 2.950 ± .015 [ 74.93 ] |
| 64 (32 pair)         | 2100/64TP      | 3.20 [ 81.3 ] | 3.150 ± .015 [ 80.01 ] |



## Note:

1. Blue edge conductor designates first pair one.
2. Dimension B pertains to bond to area only.

## Ordering Information

2100/XX TP XX

Number of Conductors  
(See Table)

Blank = Standard  
SF = Splice Free

## Note:

3. Available in standard lengths of 30 m and 100 m per roll, please specify when ordering.
4. Standard product has a 50 mm flat on 500 mm repeat (2" bond on 19.7" repeat). For special requirements, please contact your 3M sales representative. The flat can be specified anything over 25 mm (1"), the repeat can be specified from 16.5 cm to 1.2 m (6.5" to 48").

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